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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,083	12/20/2001	Ashutosh Misra	SERIE 5565 (25185-P006US)	3385

7590

07/02/2003

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EXAMINER

SNAY, JEFFREY R

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/029,083

Applicant(s)

MISRA ET AL.

Examiner

Jeffrey R. Snay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitations recited in claims 2-6 and 20 should be recited in the specification or cancelled from the claims.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 13, 14, and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Prough.

Prough discloses a method comprising measuring the refractive index, with a refractometer (column 1, line 47), to monitor the loss and need for replenishment of a digester liquor in a slurry. See e.g. the abstract and claim 1 of Prough.

4. Claims 1, 2, 7-11, 13, 14, and 16-20 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Vanell et al.

Vanell et al disclose the same process as is presently claimed. Specifically, the concentration of hydrogen peroxide in a CMP slurry is monitored by measuring the refractive index of the slurry with a refractometer. The measured loss of peroxide due to deterioration is used in feed back control to dictate the requisite makeup in the CMP process. See Column 4, line 27 to column 5, line 46.

Regarding instant claims 2 and 20, see Vanell et al at column 1, lines 18-20 disclosing the particular use of the method for polishing tungsten metals.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prough.

The method of Prough fails to specify the refractometer employed as a bench top model, or as having the particular sensitivity recited in claims 3-5. However, the provision of a bench top refractometer would have been obvious to the skilled artisan as a matter of design optimization to facilitate maintenance and portability of the analyzer. The selection of sensitivity of the chosen refractometer would have been a matter of optimization within the purview of the skilled artisan, governed by the desired precision of control desired compared with the level of cost associated with achieving that sensitivity.

9. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanell et al.

The method of Vanell et al fails to specify the refractometer employed as a bench top model, or as having the particular sensitivity recited in claims 3-5. However, the provision of a bench top refractometer would have been obvious to the skilled artisan as a matter of design optimization to facilitate maintenance and portability of the analyzer. The selection of sensitivity of the chosen refractometer would have been a matter of optimization within the purview of the skilled artisan, governed by the desired precision of control desired compared with the level of cost associated with achieving that sensitivity. It is noted that Vanell et al appear to utilize a refractometer having measurement units of 0.001 (see column 5, line 37). The selection of greater sensitivity to achieve more precise control of the slurry composition would have been obvious to one of ordinary skill in the art in view of the recognition of criticality of that control (see column 1, lines 18-20).

10. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanell et al in view of Molloy.

The method of Vanell et al fails to teach the use of a surface plasmon resonance sensor for the purpose of measuring the refractive index. However, Molloy exemplifies that such SPR sensors were well known and conventionally used for measuring refractive index. It would have been obvious to one of ordinary skill in the art to utilize surface plasmon resonance in the method of Vanell et al as a known means for accomplishing the desired refractive index measurement.

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11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as general background information related to applicant's field of endeavor.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Snay whose telephone number is (703) 308-4032. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeffrey R. Snay
Primary Examiner
Art Unit 1743

jrs
June 28, 2003